

# EPFL-Idiap-ETH Sparsity Workshop 2015

The Sparsity workshop is one-day event taking place on

**March 25, 2015 at EPFL, Room BC 420**

This workshop brings together researchers from Swiss Federal Institute of Technology in Lausanne (EPFL), Swiss Federal Institute of Technology in Zurich (ETHZ) and Idiap Research Institute, Martigny in collegial setting to share ideas and discuss problems of interest in sparsity modelling. The key objective is to foster cross-disciplinary collaborations.

This workshop features a keynote speech by Prof. Massimiliano Pontil from Centre for Computational Statistics and Machine Learning, University College London (UCL).

The invited talks will address recent theoretical developments and highlight applications in various signal processing disciplines, including image, speech and brain data processing problems.

[www.idiap.ch/workshop/idiap-epfl-eth](http://www.idiap.ch/workshop/idiap-epfl-eth)

## Morning Session 1

10:00 - 11:00

**Keynote Speaker: Learning Representations for Multiple Related Tasks, *Massimiliano Pontil, UCL***

11.00 - 11.20

Coffee break

## Morning Session 2

11.20 - 11.40

**A convex solution to disparity estimation from light fields via the primal-dual method, *Mahdad Hosseini Kamal, EPFL***

11.40 - 12.00

**Scalable optimization for mixture of regularizers, *Baran Gözcü, EPFL***

12.00 - 12.20

**From MAP to Marginals: Variational inference in Bayesian submodular models, *Josip Djolonga, ETH***

12.20 - 12.40

**Learning parametric dictionaries for signals on graphs, *Dorina Thanou, EPFL***

12.40 - 14.00

Lunch Break

## Afternoon Session 1

14.00 - 14.20

**A compressive sensing perspective of linguistic information recovery, *Pranay Dighe, Idiap Research Institute***

14.20 - 14.40

**Perceptual modeling through an auditory-inspired sparse representation, *Raphael Ullmann, Idiap Research Institute***

14.40 - 15.00

**Super-resolution radar, *Reinhard Heckel, ETH***

15.00 - 15.20

**Regularization with the Spectral k-Support Norm, *Andrew McDonald, UCL***

15.20 - 15.40

Coffee break

## Afternoon Session 2

15.20 - 15.40

**A totally unimodular view of structured sparsity, *Marwa El-Halabi, EPFL***

15.40 - 16.00

**Structured sparsity through reweighting and application to diffusion MRI, *Anna Auria Rasclosa, EPFL***

16.00 - 16.20

**Near-optimal sensor placement for linear inverse problems, *Juri Ranieri, EPFL***

Organizers: Afsaneh Avaei, Luca Baldassarre and Volkan Cevher